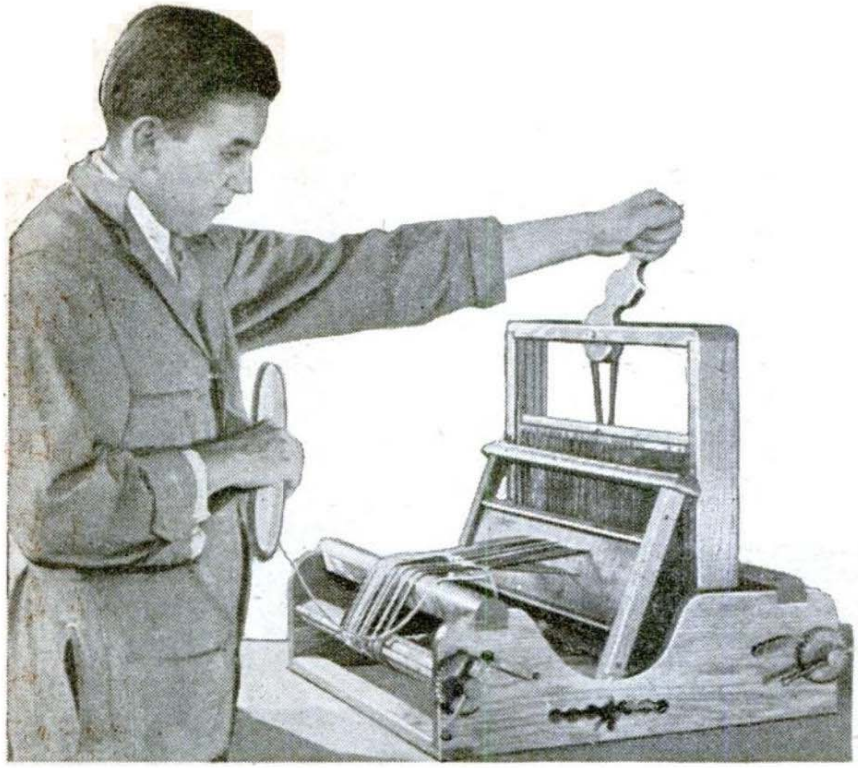
TWO SHAFT

TABLE LOOM



By

Stanley J. Drazek

1948

MAKE WEAVING

Many people have made weaving a profitable hobby with table-top looms like this one, which has several features to make the work easier and faster

By
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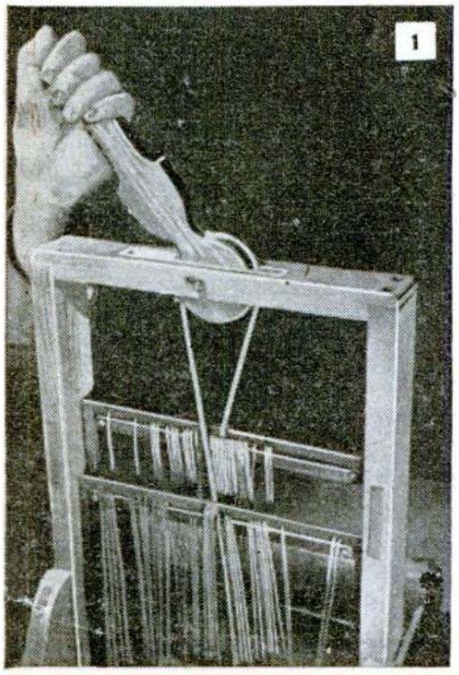
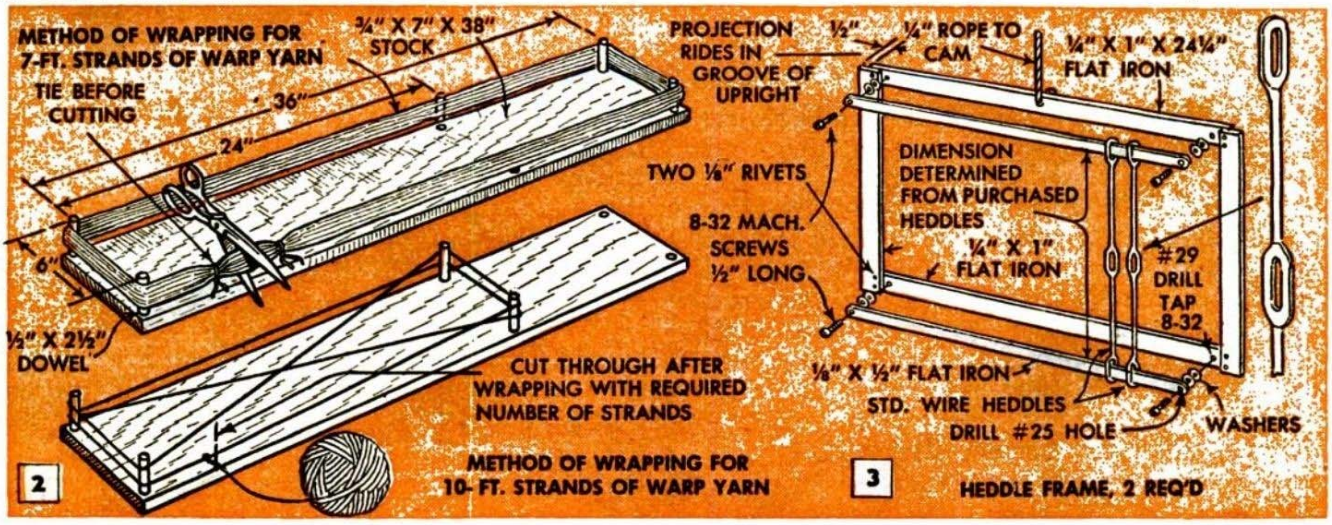


WEAVING scarves, table runners, scatter rugs in varied colors and similar articles is not only an interesting pastime for long winter evenings, but it also can be developed into a profitable hobby. Once you have mastered the technique with a little practice, you will be able to produce woven articles that will find ready sale at a good price.

With the loom pictured above, you can produce many salable articles. It consists of a frame which supports such moving parts as the warp and whip beams, heddles and frames, a reed or beater and a shuttle, the latter being a separate part which is manipulated by hand. The shuttle carries the weft thread through the shed, a triangular space between the warp threads which is made by shifting the heddles after each stroke, or pass, of the shuttle. The beater or reed, hand-operated on small looms, is pivoted to the frame of the loom and is for the purpose of beating the weft thread into the warp after the shuttle has passed through the shed. The table loom detailed in Fig. 4,


METHOD OF WRAPPING FOR 7-FT. STRANDS OF WARP YARN
TIE BEFORE CUTTING
¾" X 7" X 38" STOCK
36"
24"
6"
½" X 2½" DOWEL
CUT THROUGH AFTER WRAPPING WITH REQUIRED NUMBER OF STRANDS
METHOD OF WRAPPING FOR 10-FT. STRANDS OF WARP YARN
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PROJECTION RIDES IN GROOVE OF UPRIGHT
½"
¼" ROPE TO CAM
¼" X 1" X 24¼" FLAT IRON
TWO ⅛" RIVETS
8-32 MACH. SCREWS ½" LONG
DIMENSION DETERMINED FROM PURCHASED HEDDLES
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#29 DRILL TAP 8-32
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STD. WIRE HEDDLES
DRILL #25 HOLE
WASHERS
3
HEDDLE FRAME, 2 REQ'D

has two new features which make operation easier and faster. The heddles are shifted by a cam arrangement mounted on the top cross member of the frame and operated as in Fig. 1. Second important feature is the adjustable beater pivot detailed in Fig. 4. This adjustment gives five different positions of the beater pivot and enables the weaver to keep the reed always at 90 deg. with the cloth for more uniform work. A cloth beam fitted with a removable spline, Figs. 4 and 7, makes it unnecessary to tie knots in the warp threads when stringing the loom preparatory to weaving.

Before starting assembly, determine the size of the loom from the maximum width of cloth you desire to weave, keeping in mind, of course, the size limitations of the table-top type. As an example, the loom detailed in Fig. 4 is designed for a cloth width of 24 in. A smaller size also can be made with an over-all width of 16 in. for a cloth width of 12 in. This size is especially suited to weaving table runners, scarves, etc. Hardwood

TEXTILE TERMINOLOGY

WARP BEAM: The roller of a loom upon which the warp is wound.

HEDDLES: Vertically held parallel wires having an eye in the center through which the warp is drawn.

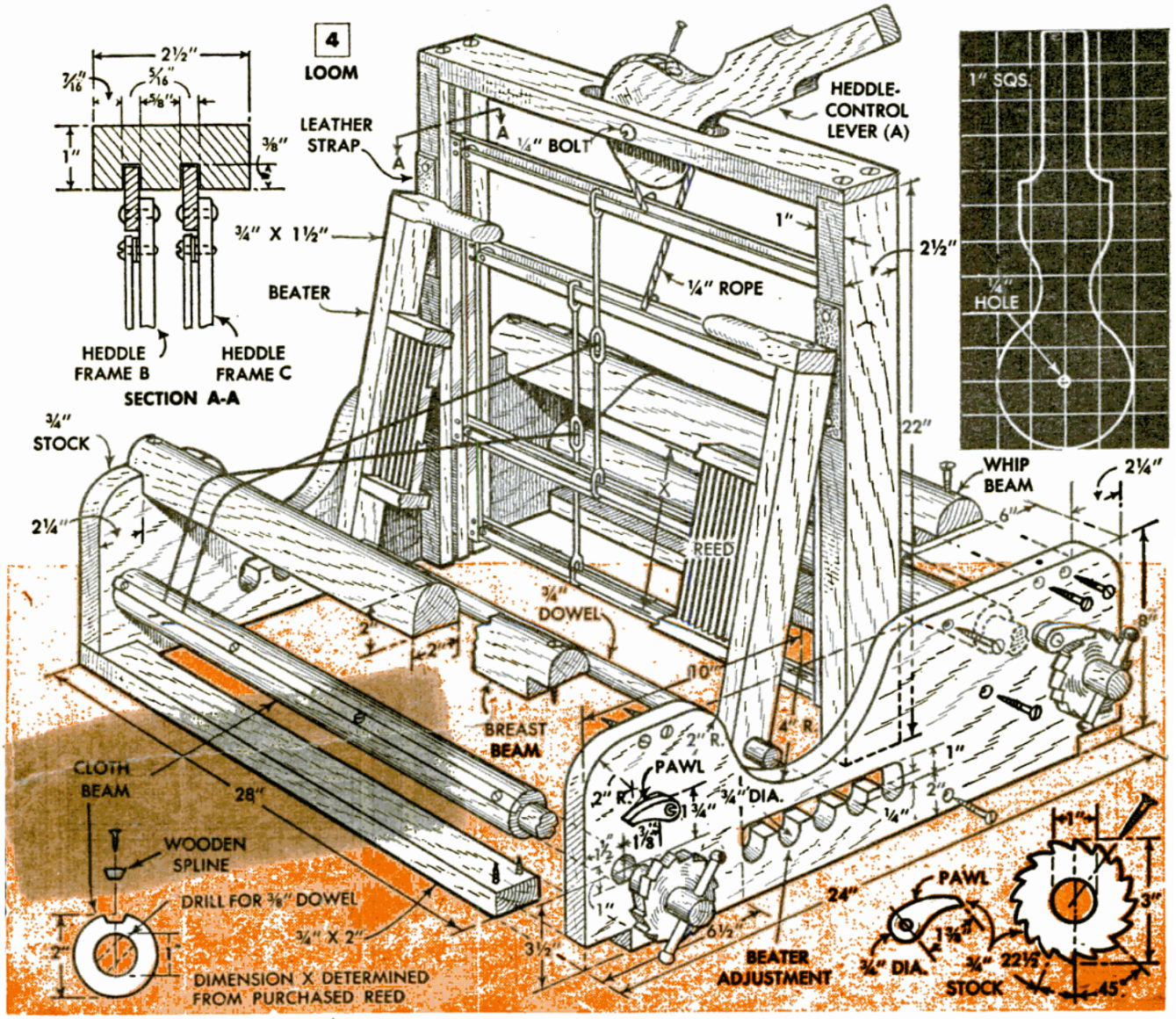
WARP: Threads that pass through heddles and reed.

SHED: Space between warp when heddles are raised or lowered.

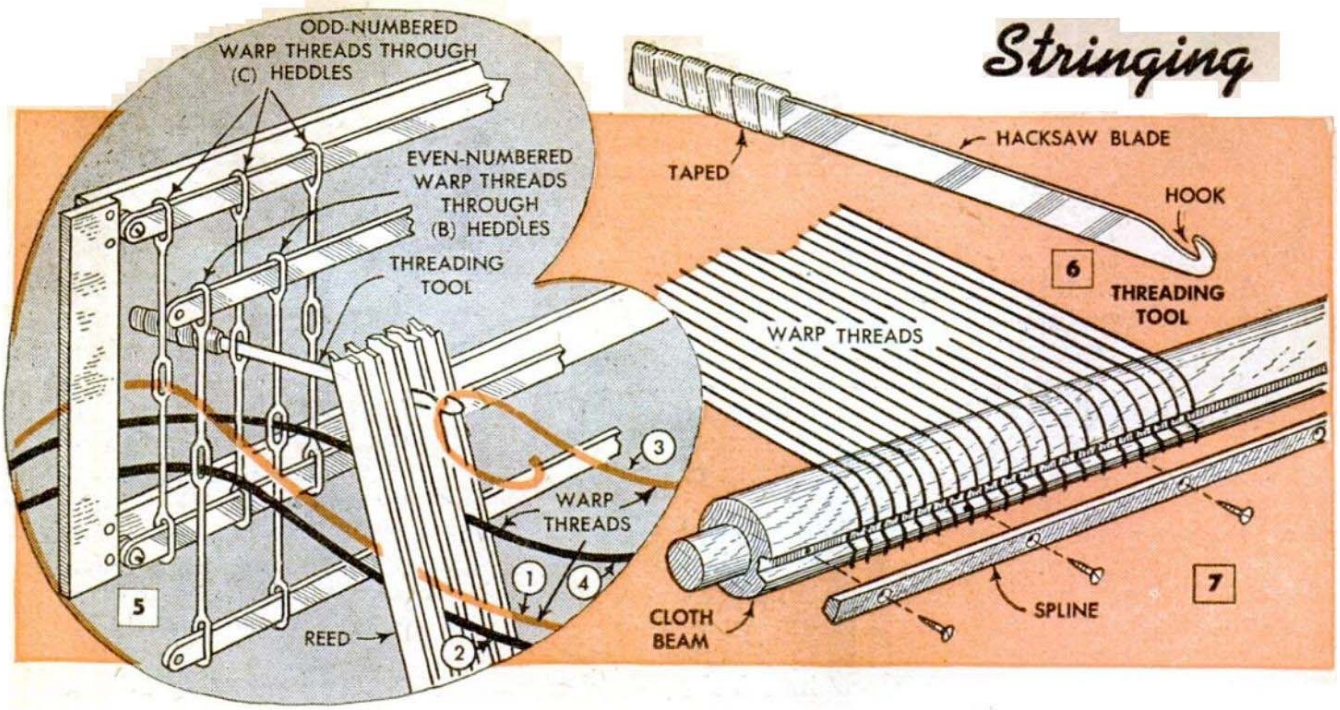
WEFT (WOOF): Threads or yarn interlacing the warp at right angles.

SHUTTLE: An instrument upon which weft is wound for passing through warp shed while weaving.

REED (BEATER): A device to comb or beat the weft between the strands of the warp.



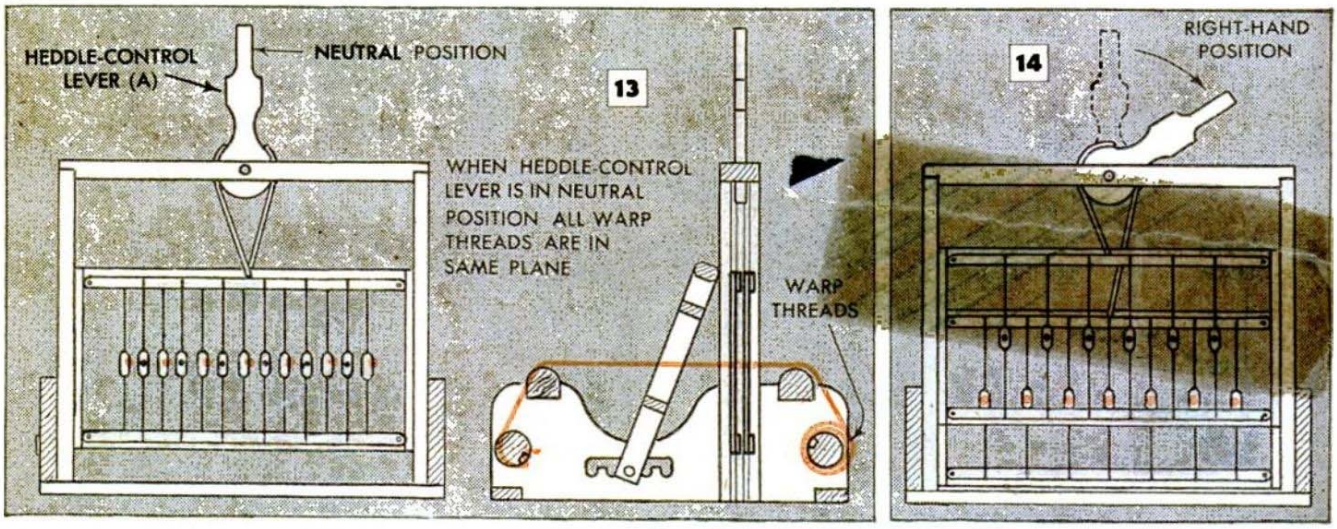
Stringing

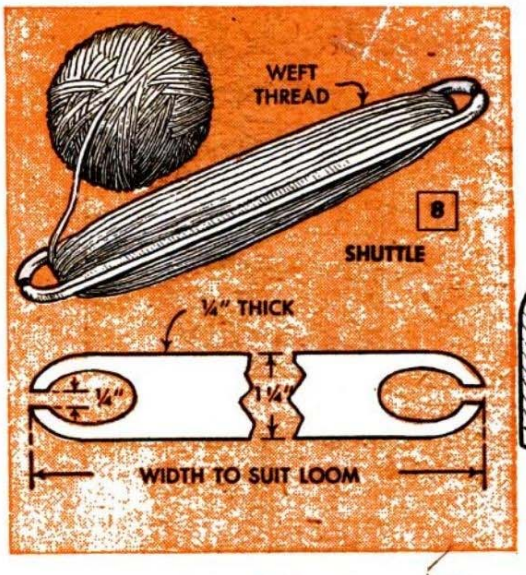


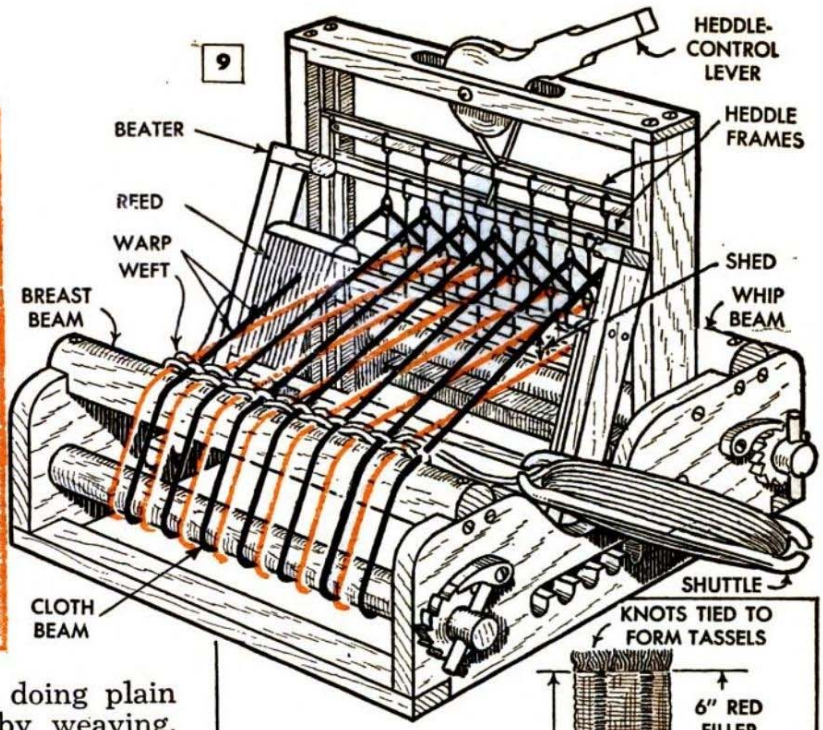
is used for all parts of the loom frame, the beater frame, rollers, and the breast and whip beams. Maple is good but birch does equally well and saws and planes somewhat easier. The heddles and heddle frames, Fig. 3, and the reed may be purchased from dealers in craftwork supplies. These parts are inexpensive and obtaining them ready-made saves a lot of time. For average weaving a 30-dent reed—30 spaces per inch—is satisfactory, as running the warp thread through each dent will give 30 warp threads per inch. Other combinations are possible.

The heddle frames slide in grooves cut in the frame uprights, Fig. 4. The grooves should be about 1/16 in. oversize so that the frames will slide easily. Two dimensions, one on the heddles in Fig. 3 and another on the reed in Fig. 4, must be determined from these parts. Have the parts at hand before assembling the loom. Hardwood ratchets and pawls on the rollers, Fig. 4, are for the purpose of keeping tension on the warp threads and for rolling up the finished cloth on the cloth beam as the weaving progresses.

Fig. 2 shows methods of cutting 6 and 10-ft. warp yarn, or threads, to exact length. This done, you string the loom as in Figs. 5, 6 and 7. Notice in Fig. 5 how the odd-numbered warp threads are pulled through the heddles (C) with a threading tool made as in Fig. 6. The even-numbered threads go through the heddles (B). Both sets of threads pass over the whip beam and are wound on the warp beam at the rear of the loom. Study Fig. 9, which shows the warp threads in exaggerated size and in two colors for clarity. Also compare with the shed formed by shifting the heddle-control lever, Fig. 13, to the right-hand position as in Fig. 14. Fig. 7 shows how the ends of the warp threads are locked to the cloth beam with a spline which fits in a groove cut in the roller. Figs. 13 to 15 inclusive show the

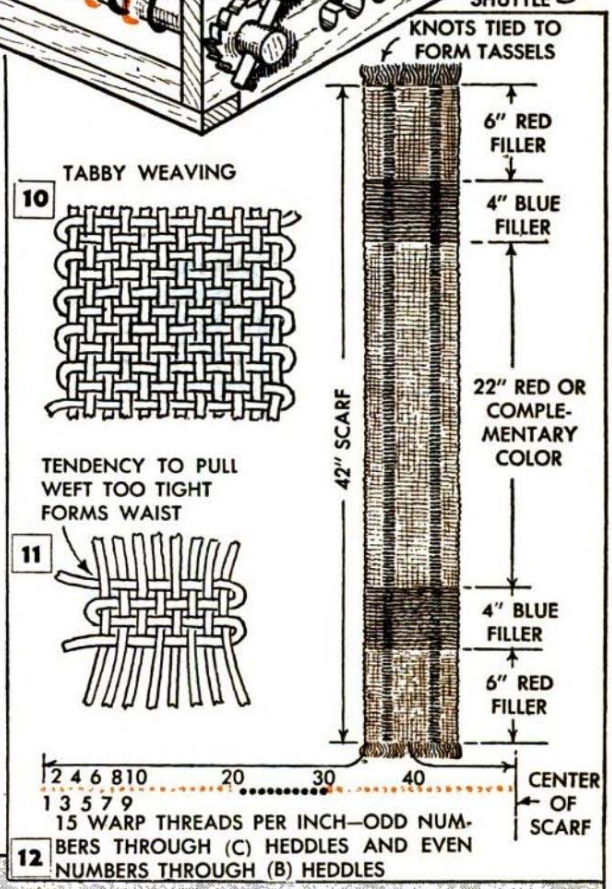


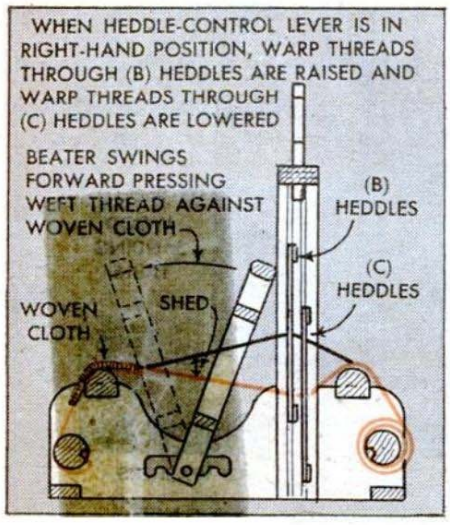


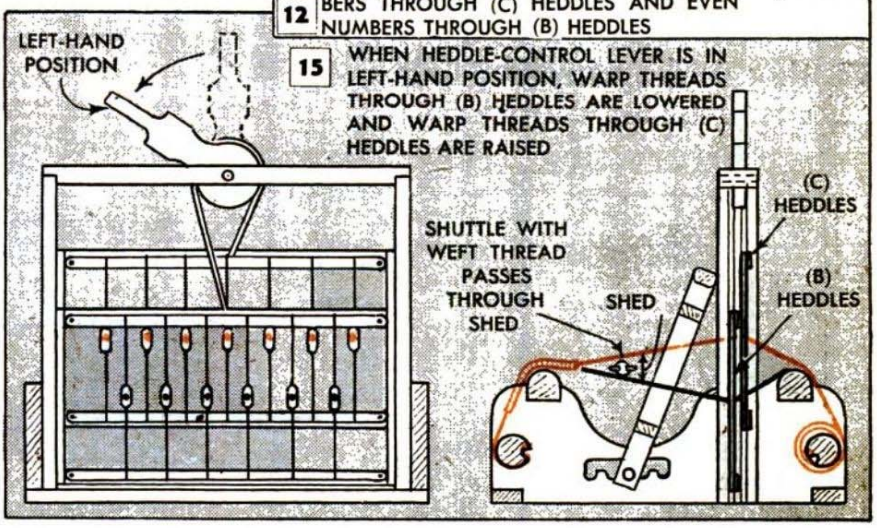


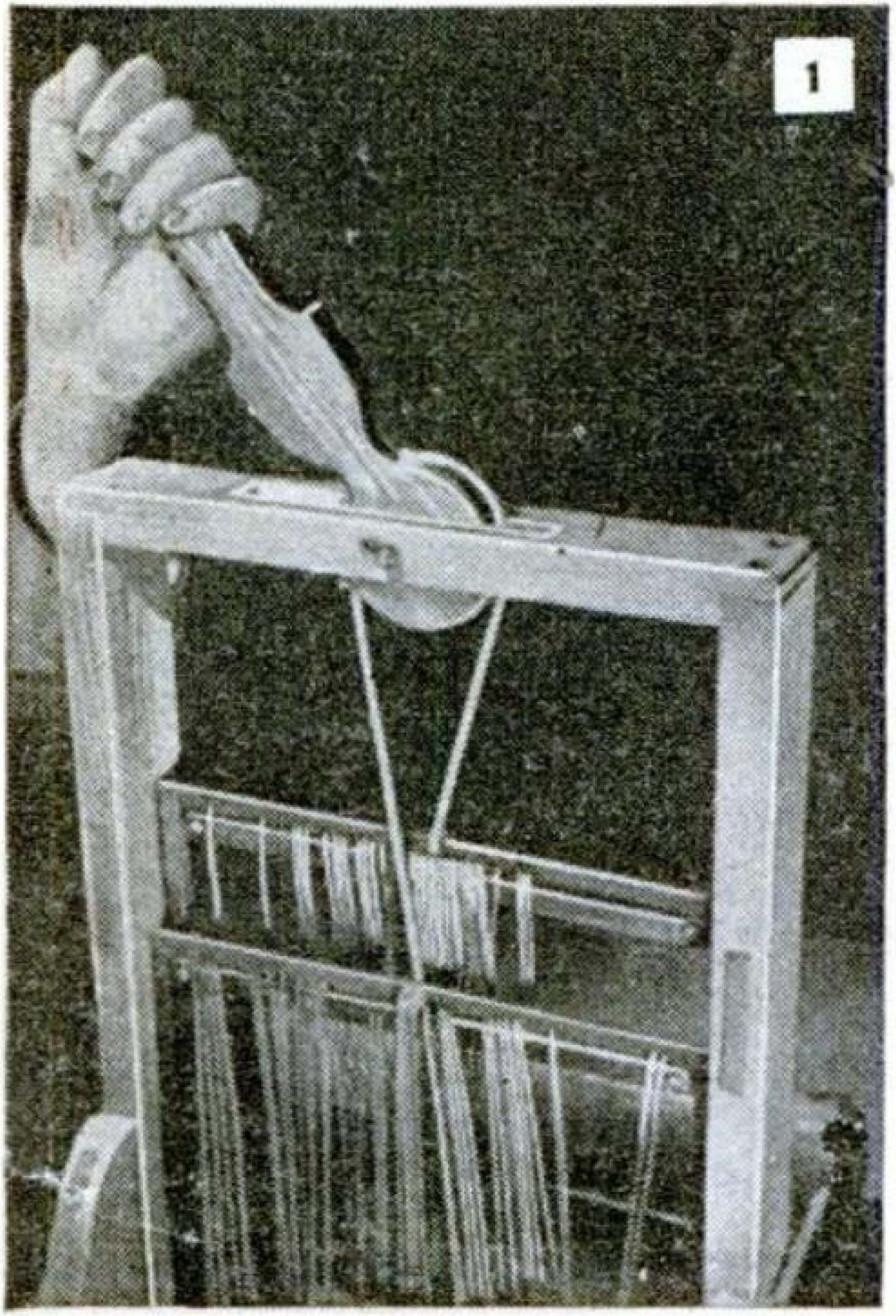
operation of the loom when doing plain weaving. Fig. 10 shows tabby weaving. Notes on the detail drawings, Figs. 13 to 15, explain the sequence of operations clearly. One thing to watch in weaving is the tendency to pull the weft too tightly. This forms what weavers call a waist, Fig. 11, and causes the woven strip to become narrower as the weaving progresses. Generally, tension on the weft must be watched more closely on coarsely woven cloth. The greater the number of warp threads per inch the less tendency there is for this fault to appear in weaving.

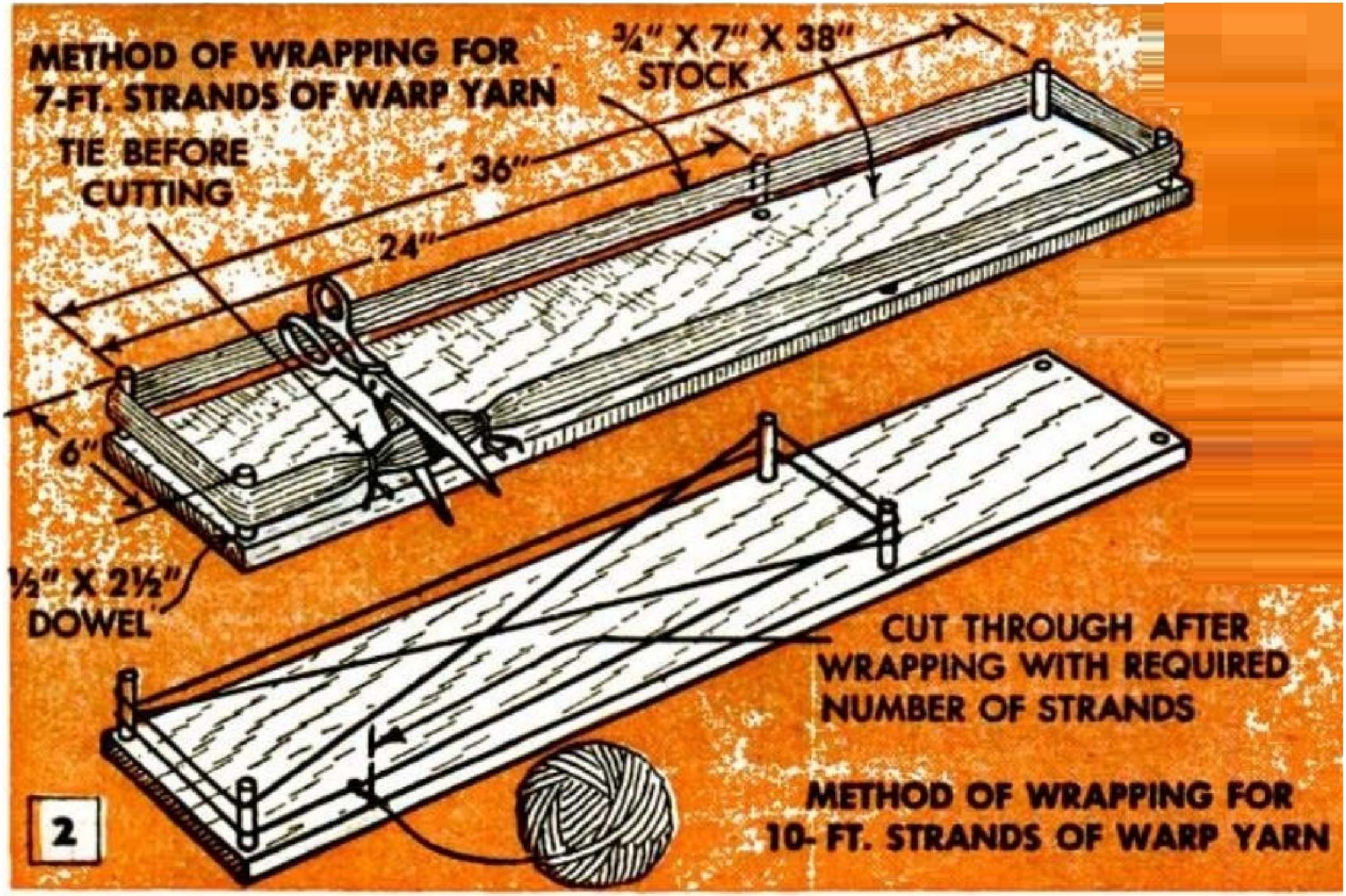
Fig. 12 shows a vari-colored pattern woven in a table scarf. Here variations are made in the warp threads and two shuttles are used, one carrying the red and one the blue filler or weft. Shuttles are made from a strip of hardwood with the ends shaped as in Fig. 8. Length of the shuttle should be approximately half the width of the cloth being woven, although some weavers prefer a shorter shuttle.


KNOTS TIED TO FORM TASSELS
6" RED FILLER
4" BLUE FILLER
22" RED OR COMPLEMENTARY COLOR
4" BLUE FILLER
6" RED FILLER
42" SCARF
TABBY WEAVING
10
TENDENCY TO PULL WEFT TOO TIGHT FORMS WAIST
11
2 4 6 8 10 20 30 40
1 3 5 7 9
15 WARP THREADS PER INCH—ODD NUMBERS THROUGH (C) HEDDLES AND EVEN NUMBERS THROUGH (B) HEDDLES
CENTER OF SCARF
12


WHEN HEDDLE-CONTROL LEVER IS IN RIGHT-HAND POSITION, WARP THREADS THROUGH (B) HEDDLES ARE RAISED AND WARP THREADS THROUGH (C) HEDDLES ARE LOWERED
BEATER SWINGS FORWARD PRESSING WEFT THREAD AGAINST WOVEN CLOTH
(B) HEDDLES
(C) HEDDLES
WOVEN CLOTH
SHED


LEFT-HAND POSITION
15
WHEN HEDDLE-CONTROL LEVER IS IN LEFT-HAND POSITION, WARP THREADS THROUGH (B) HEDDLES ARE LOWERED AND WARP THREADS THROUGH (C) HEDDLES ARE RAISED
SHUTTLE WITH WEFT THREAD PASSES THROUGH SHED
SHED
(C) HEDDLES
(B) HEDDLES


1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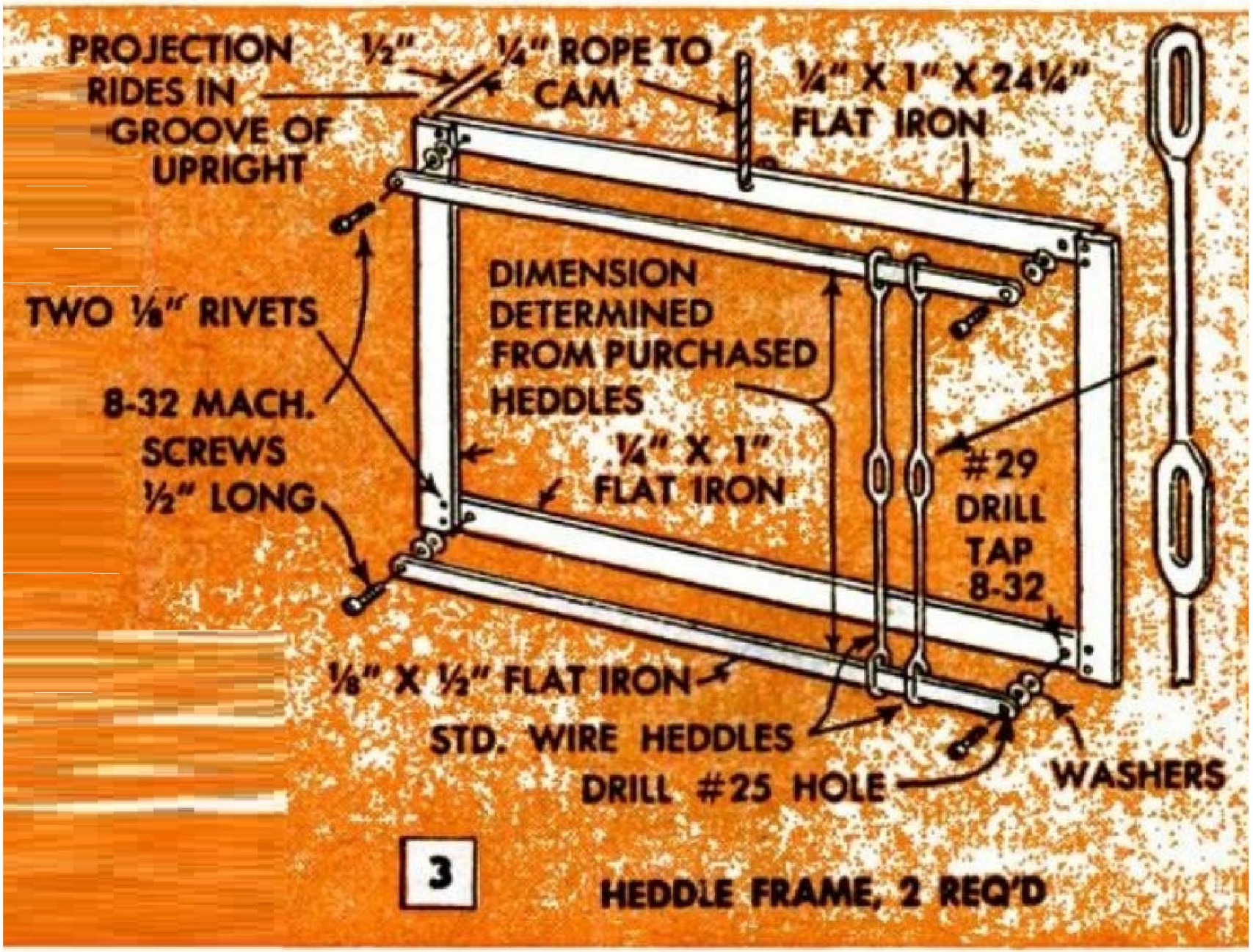
7-FT. STRANDS OF WARP YARN
¾" X 7" X 38"
STOCK
TIE BEFORE
CUTTING
36"
24"
6"
½" X 2½"
DOWEL
CUT THROUGH AFTER
WRAPPING WITH REQUIRED
NUMBER OF STRANDS
METHOD OF WRAPPING FOR
10-FT. STRANDS OF WARP YARN
2


PROJECTION RIDES IN GROOVE OF UPRIGHT
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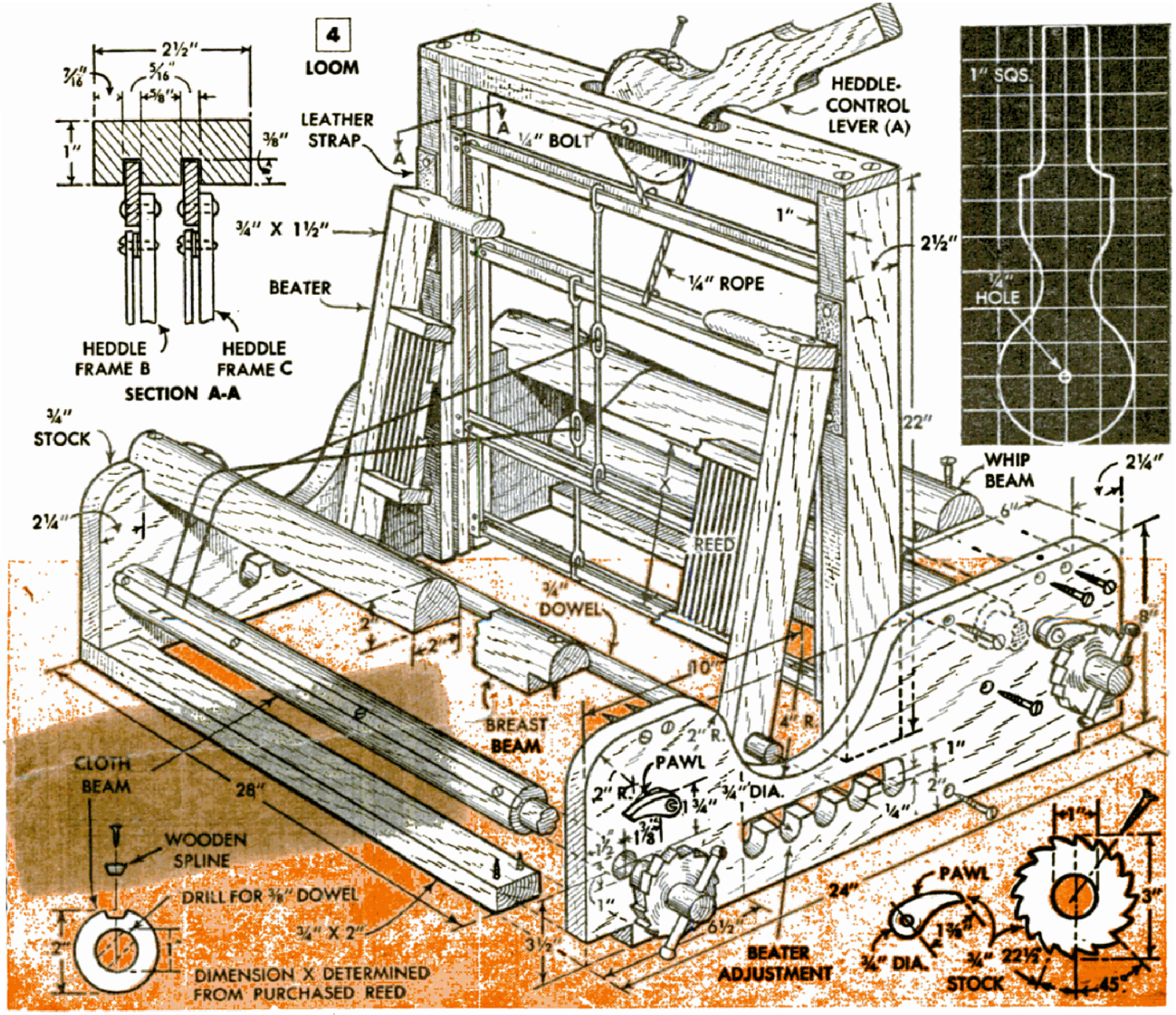
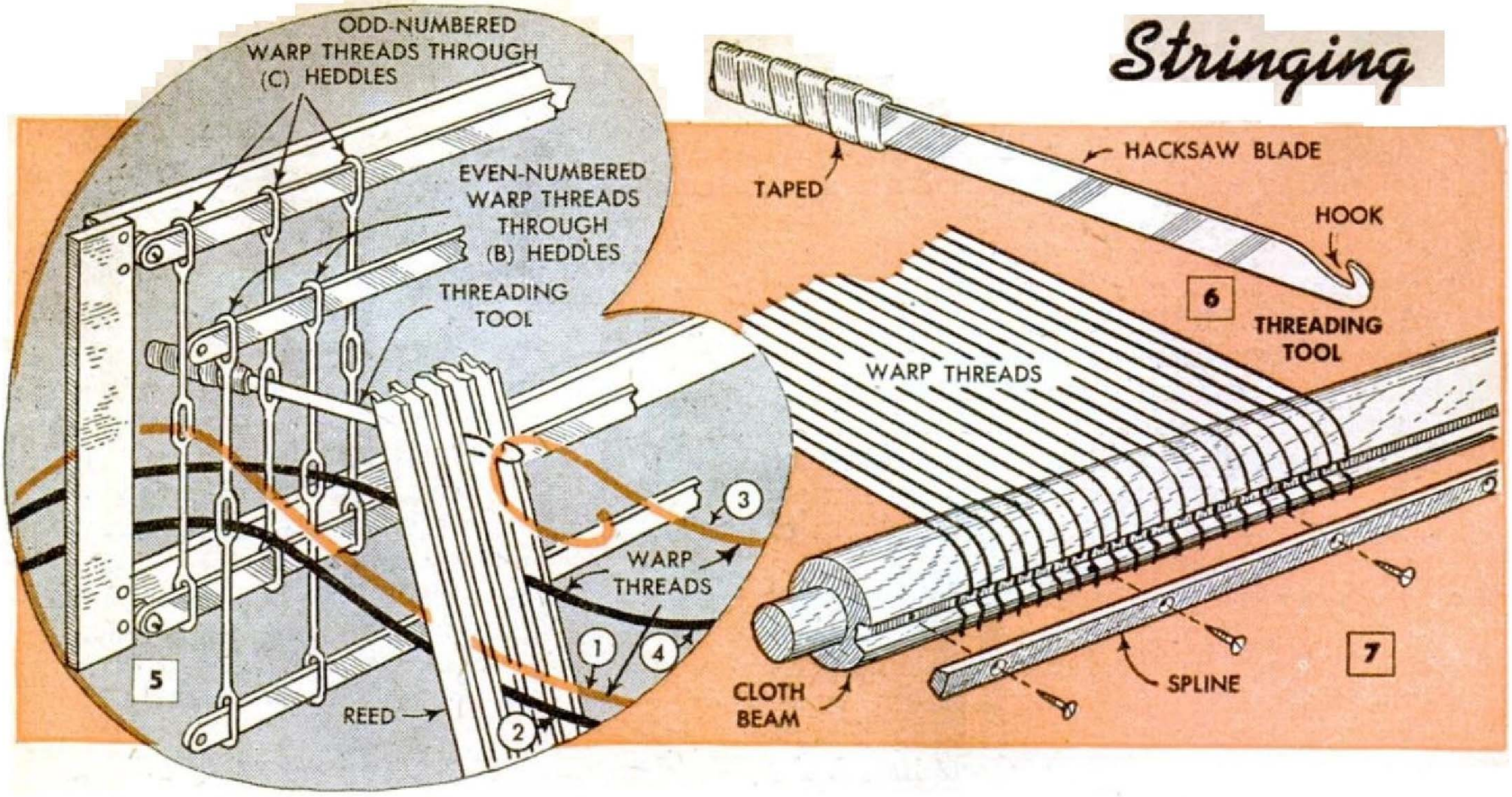
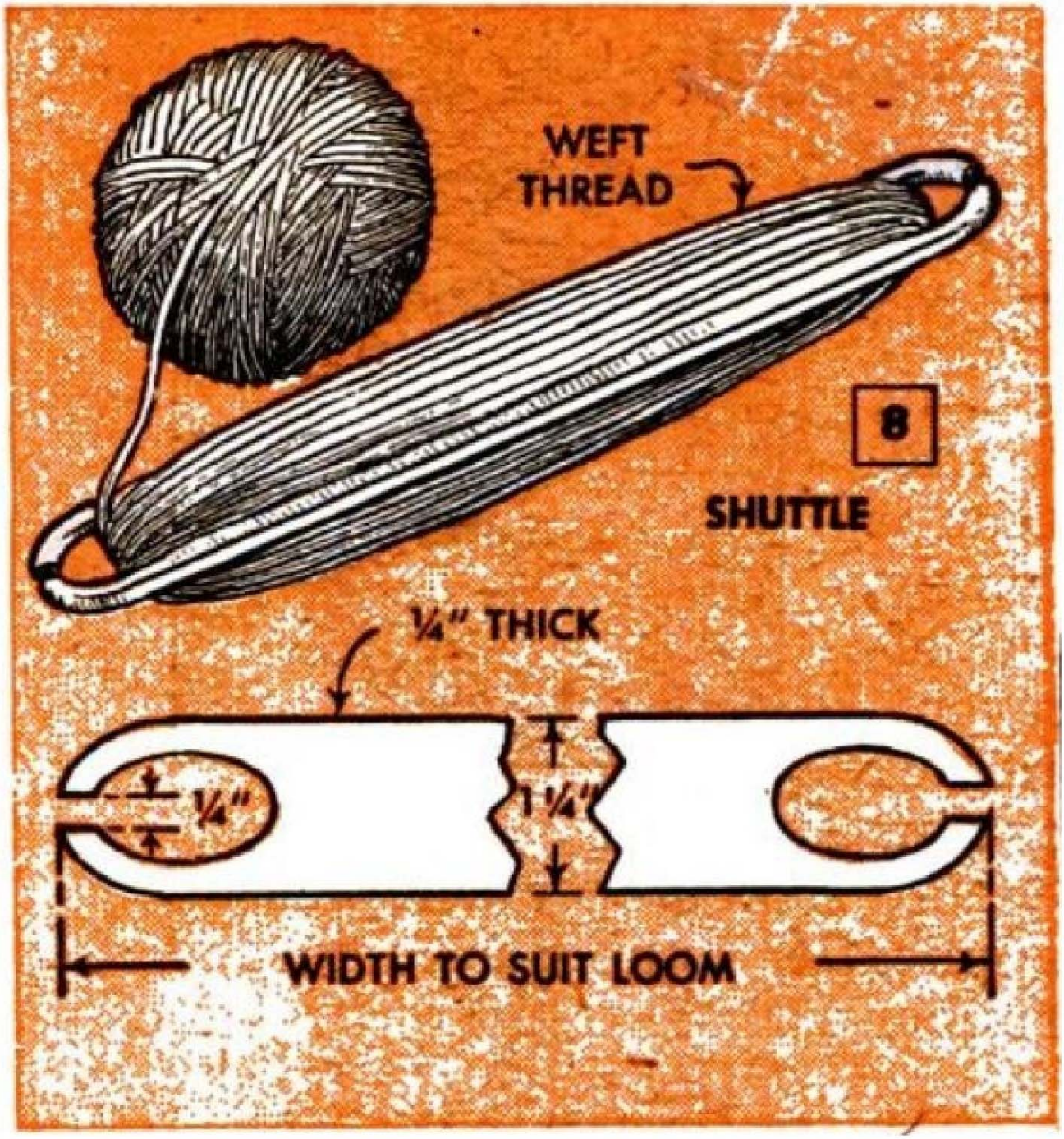
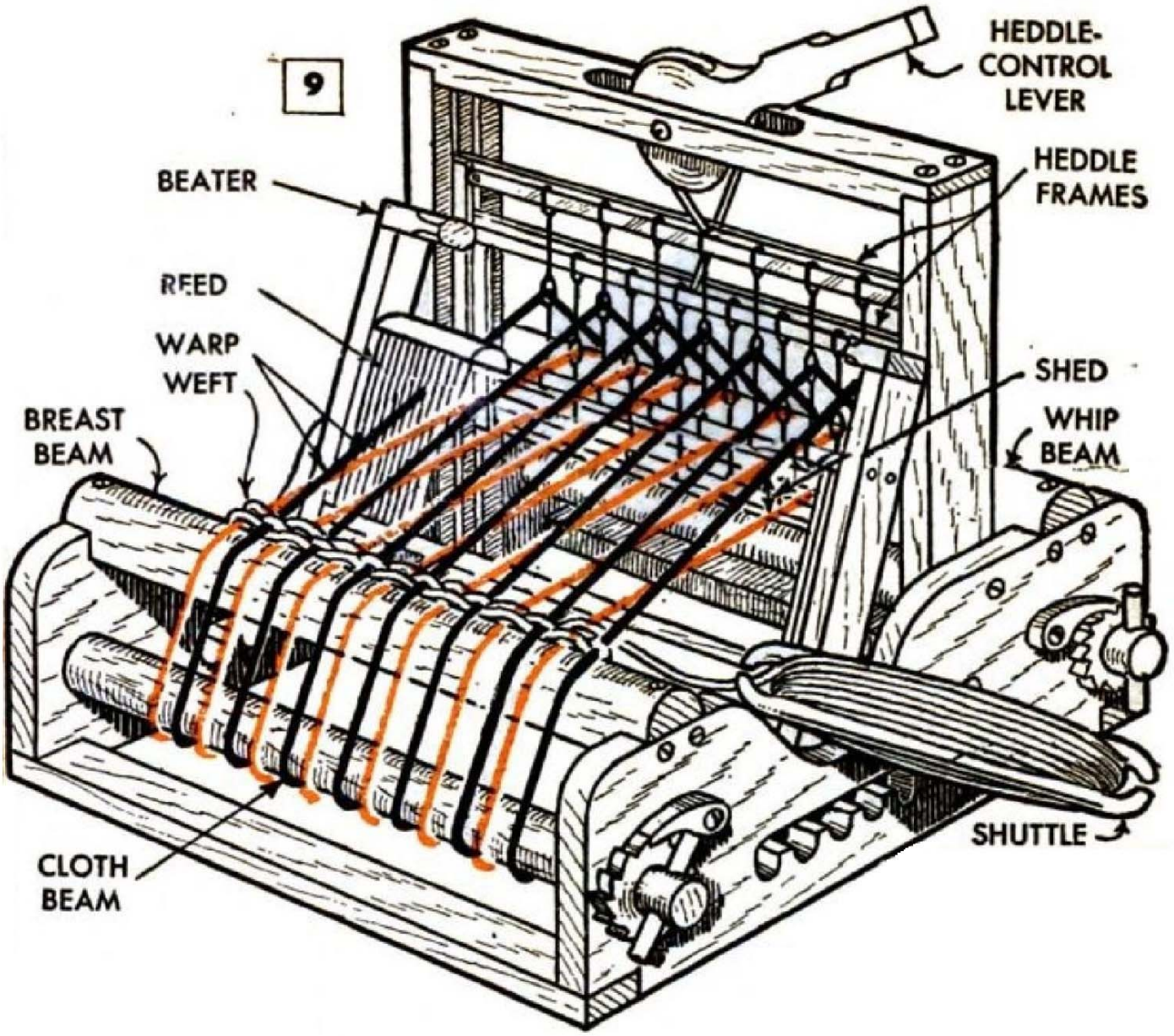
HEDDLE FRAME, 2 REQ'D

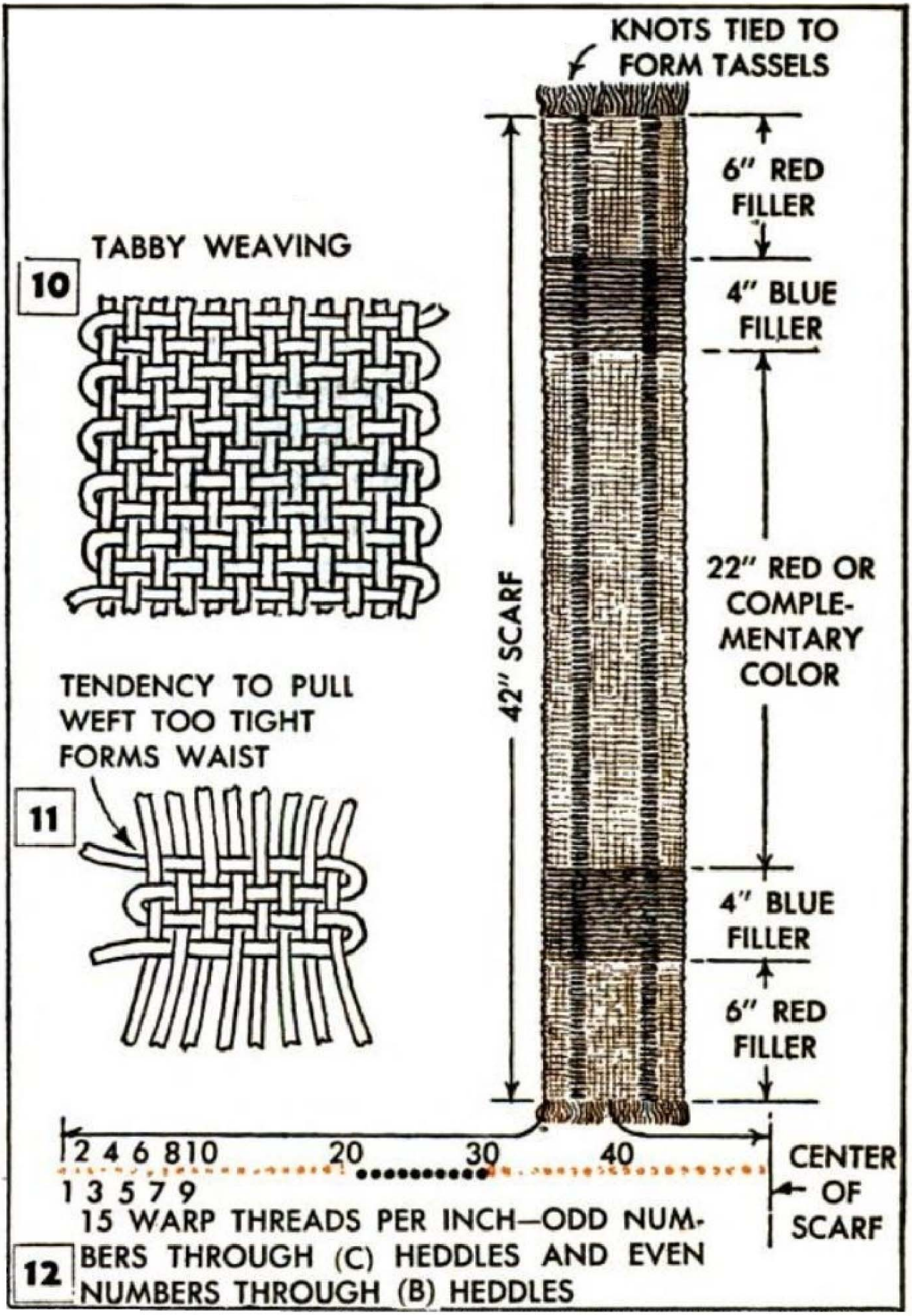

4
LOOM
2½"
7/16"
5/16"
3/8"
3/8"
1"
SECTION A-A
HEDDLE FRAME B
HEDDLE FRAME C
LEATHER STRAP
A
A
¼" BOLT
HEDDLE-CONTROL LEVER (A)
¾" X 1½"
BEATER
1"
2½"
¼" ROPE
22"
1" SQS.
¼" HOLE
¾" STOCK
2¼"
WHIP BEAM
2¼"
6"
REED
¾" DOWEL
2"
2"
10"
8"
BREAST BEAM
2" R.
4" R.
PAWL
2" R.
¾" DIA.
1¾"
1⅞"
1"
2"
¼"
CLOTH BEAM
28"
WOODEN SPLINE
DRILL FOR ⅜" DOWEL
¾" X 2"
2"
1"
DIMENSION X DETERMINED FROM PURCHASED REED
3½"
6½"
24"
BEATER ADJUSTMENT
PAWL
1⅜"
¾" DIA.
¾" STOCK
22½°
45°
1"
3"

Stringing


ODD-NUMBERED
WARP THREADS THROUGH
(C) HEDDLES
EVEN-NUMBERED
WARP THREADS
THROUGH
(B) HEDDLES
THREADING
TOOL
WARP
THREADS
REED
5
TAPED
HACKSAW BLADE
HOOK
6
THREADING
TOOL
WARP THREADS
CLOTH
BEAM
SPLINE
7


WEFT
THREAD
8
SHUTTLE
¼" THICK
¼"
1¼"
WIDTH TO SUIT LOOM


9
HEDDLE-
CONTROL
LEVER
HEDDLE
FRAMES
BEATER
REED
WARP
WEFT
SHED
WHIP
BEAM
BREAST
BEAM
SHUTTLE
CLOTH
BEAM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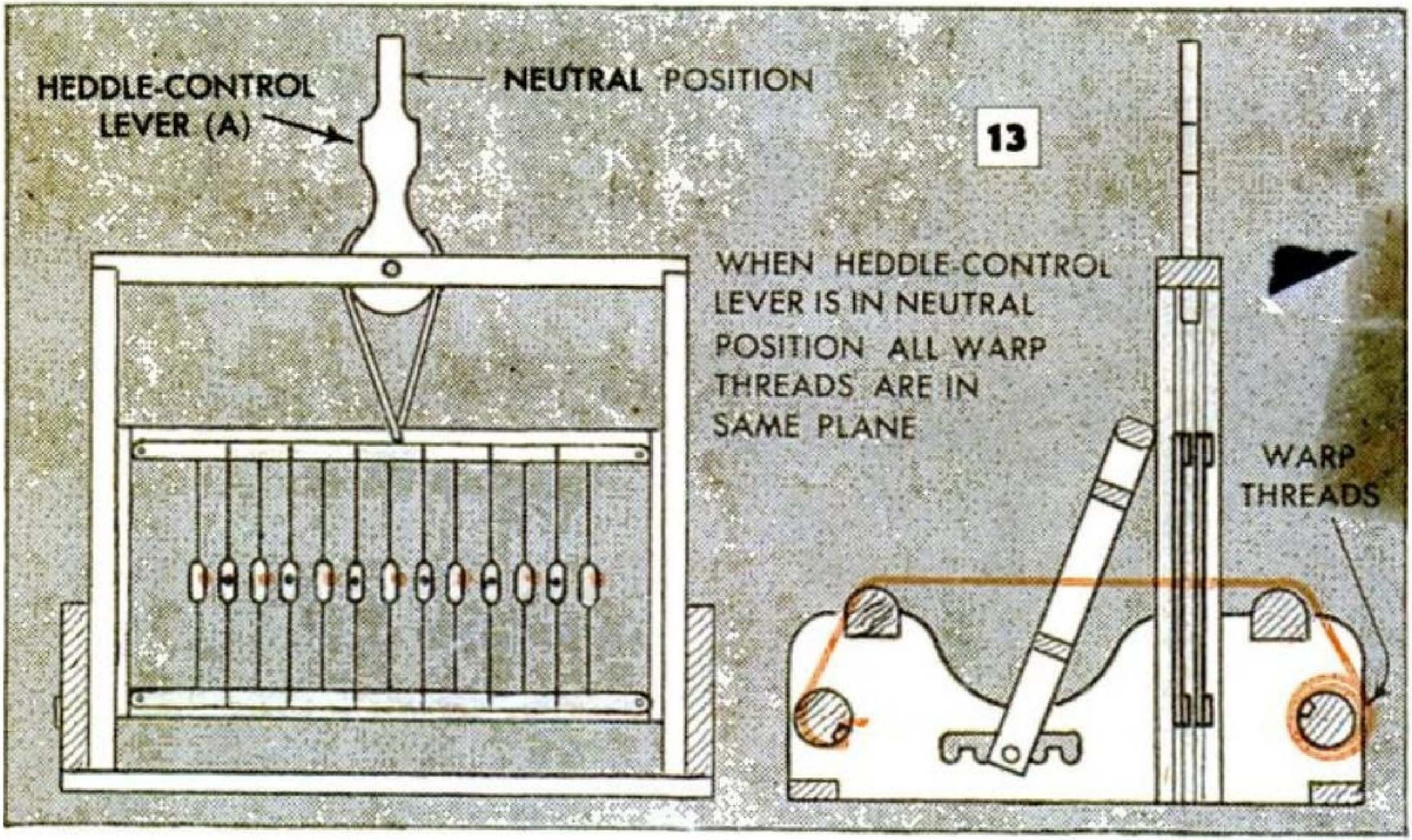
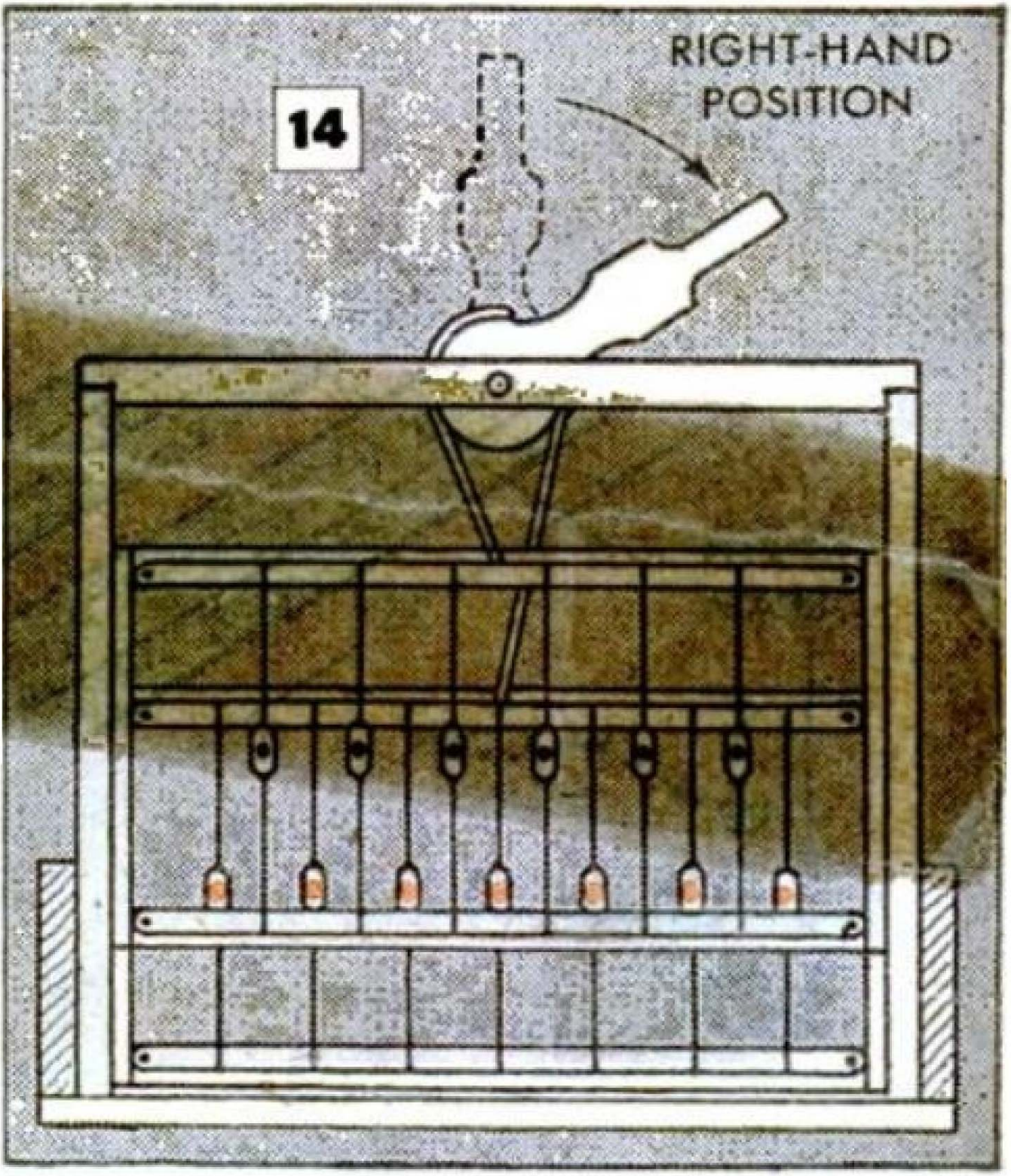
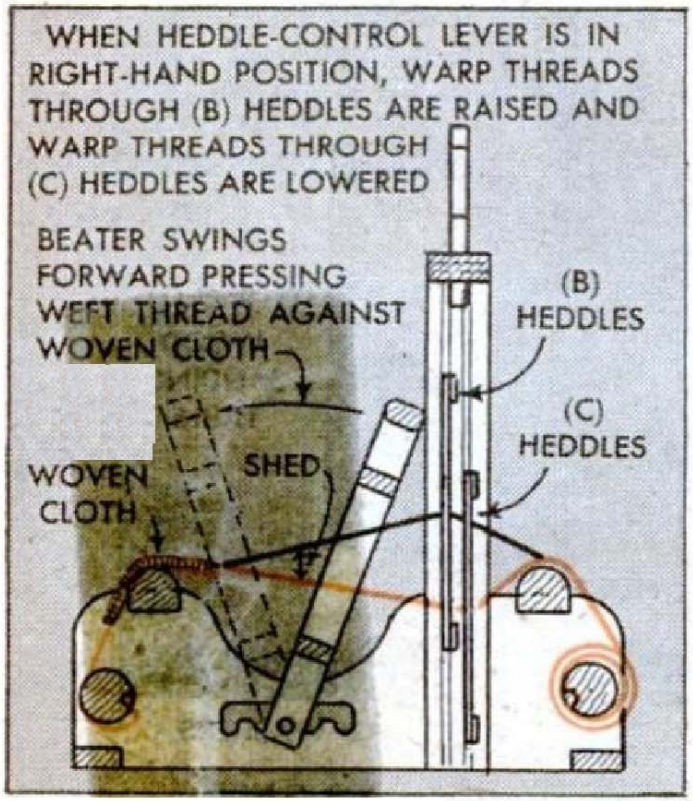

HEDDLE-CONTROL LEVER (A)
NEUTRAL POSITION
13
WHEN HEDDLE-CONTROL LEVER IS IN NEUTRAL POSITION ALL WARP THREADS ARE IN SAME PLANE
WARP THREADS


14
RIGHT-HAND
POSITION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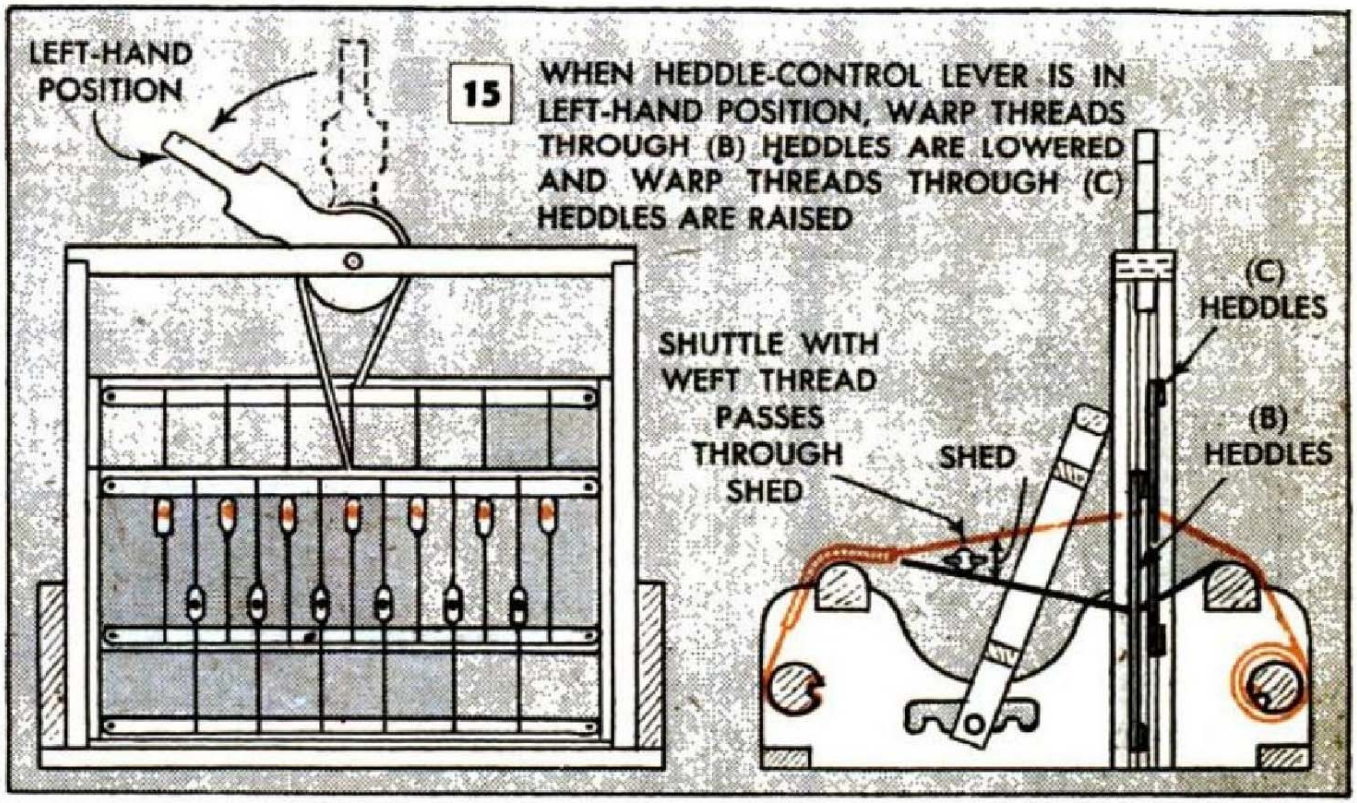
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(C) HEDDLES
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